

ABSTRACT OF THE DISCLOSURE

A scalable QAM system and communication method. High-level QAM signals are broadcast from a transmitter. The transmitter comprises a scalable frame structure in a MAC layer and a bitmap method in a physical layer transmitting modulated signals with data distributed in different bit positions. Each client determines whether to demodulate all the received data on the bit plane or only a portion of the data in certain bit positions according to the transmission quality (SNR) of the received signal, in order to acquire a lower bit error rate and improve the efficiency of the transmission bandwidth.